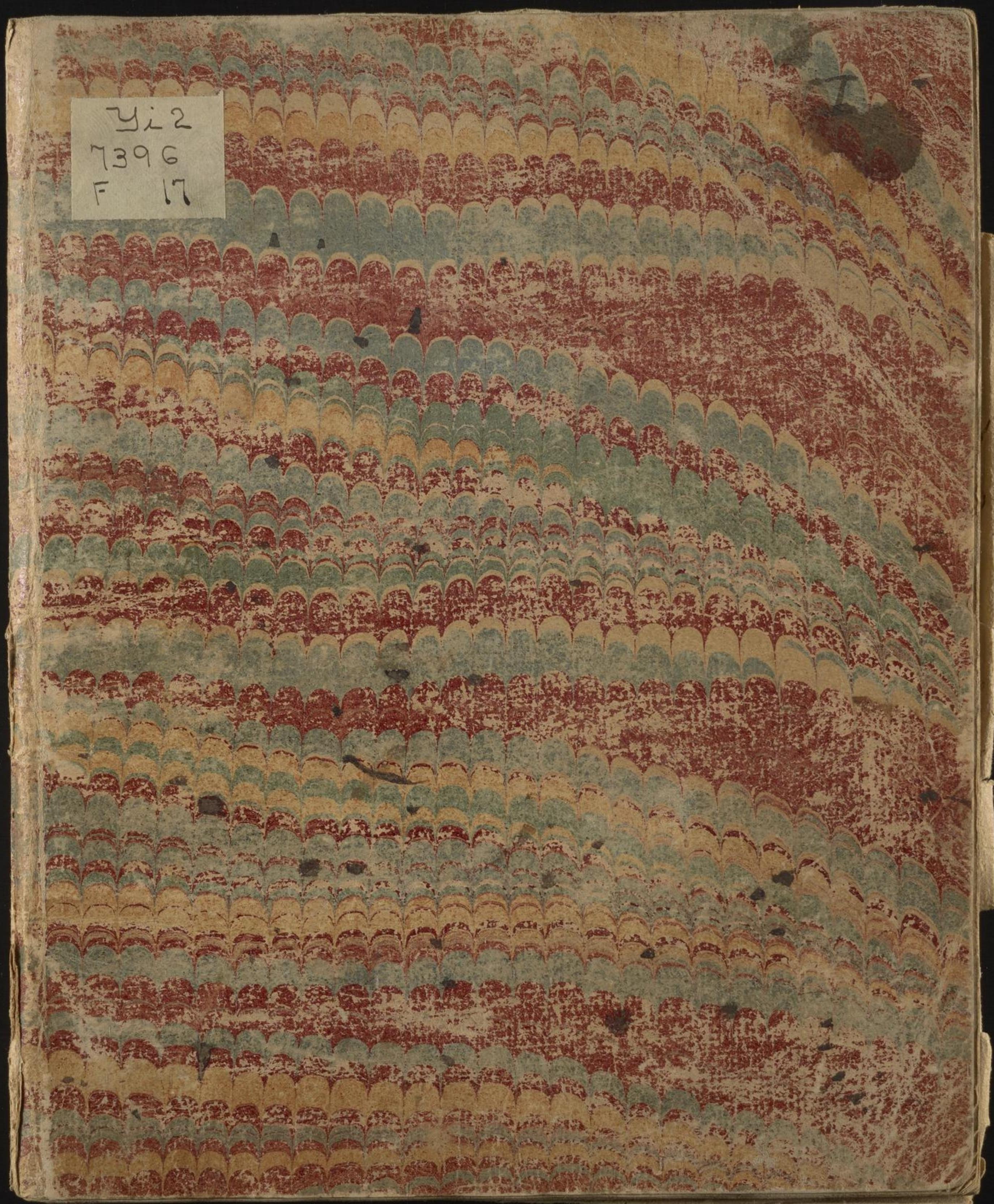
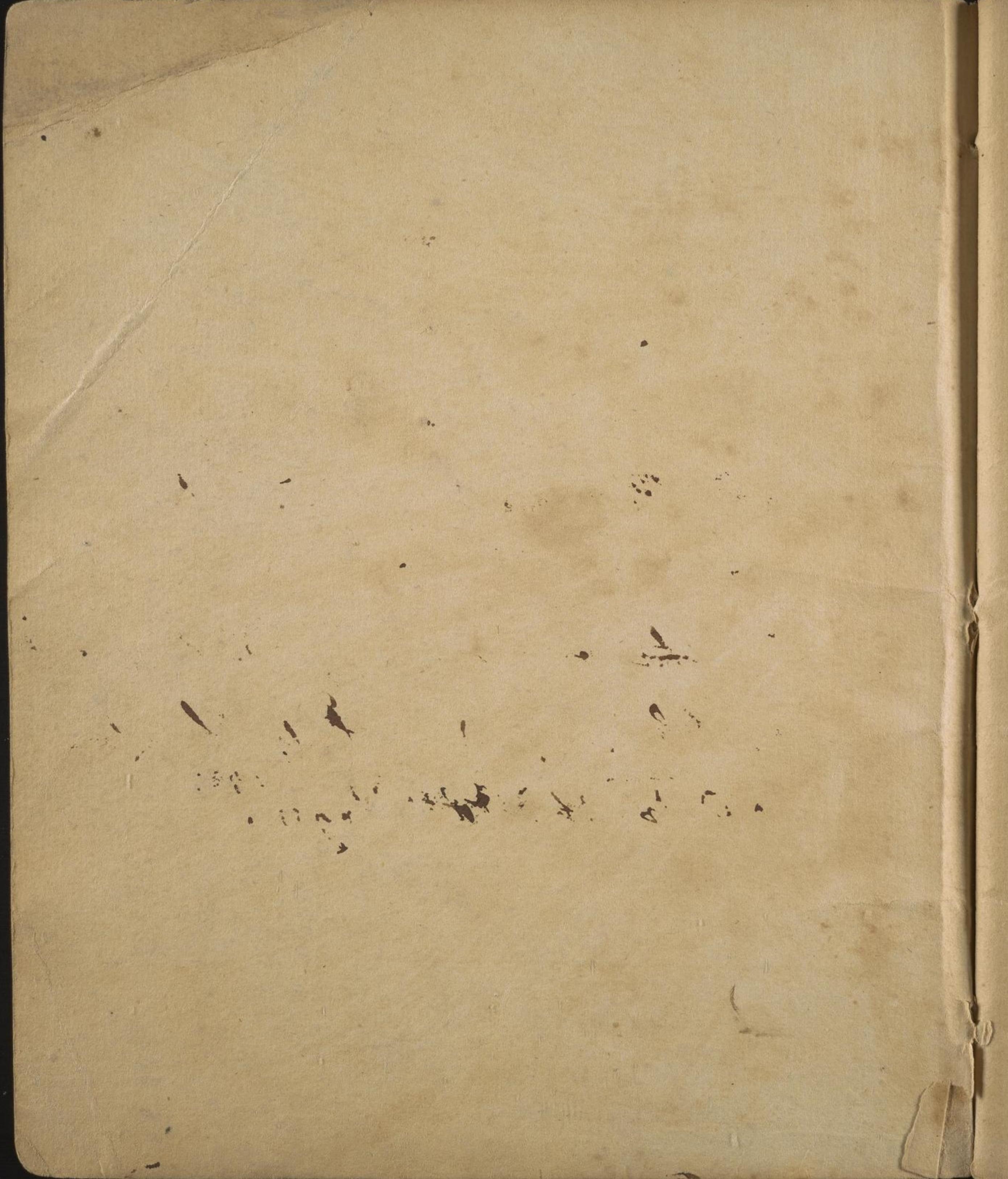


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Lectures on  
Pathology -

Began Feb: 4<sup>th</sup> 1793.

Rise of Diseases - 6.  
~~most & indubitably 24.~~  
~~most & physical with 24~~  
of Heat — 29.

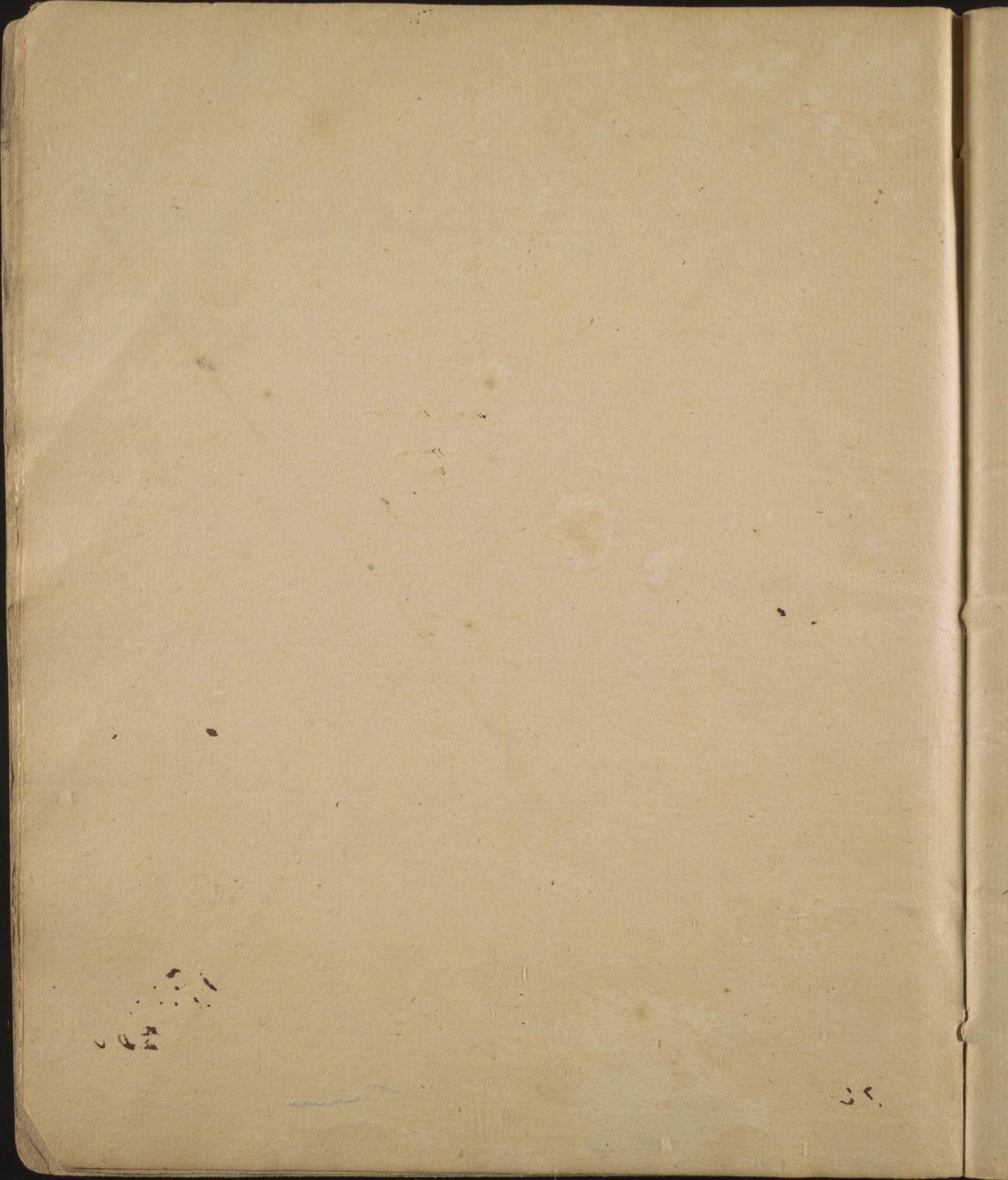
Began in 1804 Decem<sup>r</sup> 10.<sup>th</sup>: 1/16  
— in 1805 Decem<sup>r</sup> 19.<sup>th</sup>  
— in 1808 Decem<sup>r</sup> 13.

V I have hitherto<sup>considered</sup> the human body, as Divines consider the human mind in paradise, viz in a perfect, or healthy state. It remains now that we view this body, as Divines view the mind after the fall, viz in an imperfect or diseased state. <sup>& death</sup> vice, like moral evil were the consequence of the loss of primeval innocence.

Gentlemen, ✓

~~In my introductory lecture  
in my lectures on Physiology &  
informed you that I intended to follow  
Pathology.      "      fist  
the example of the divines who consider  
man      in a state of innocence,  
born      in a state of sinfulness,  
and afterwards describe the      disorders  
vices & weaknesses  
which were introduced into his  
mind by his apostasy from his maker.~~

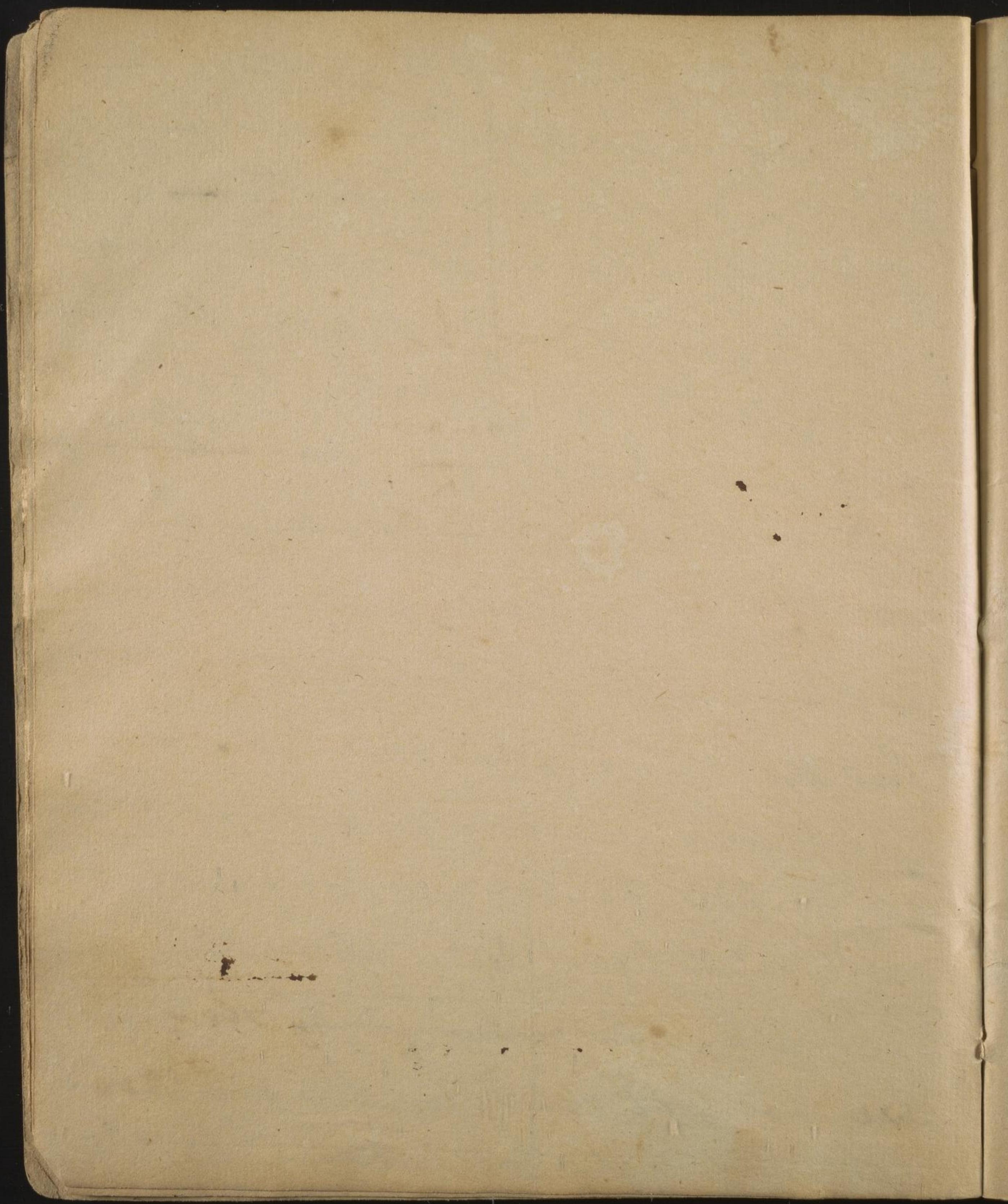
- I have hitherto considered the human  
body only in ~~its~~ state of healthy states.  
It remains now that we follow it  
from the gates of Eden, and examine  
the changes which have been pro-  
duced upon it by the buyers & sellers,



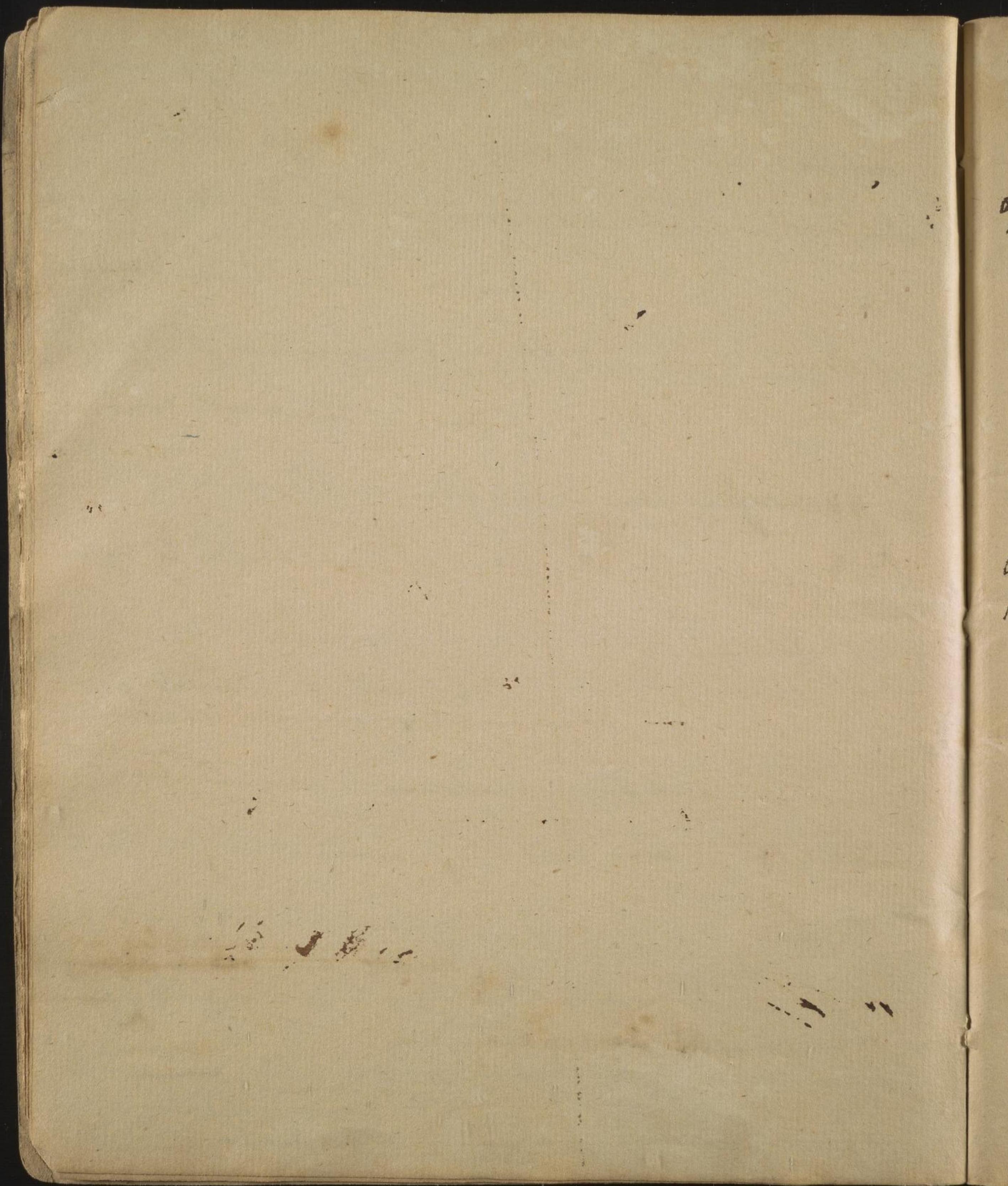
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and by the storms & tempests to which  
it was exposed in consequence of the  
loss of primal innocence. To this the  
fall of man we must ascribe the origin  
of sickness and death. It is true the execu-  
tion of the sentence of death which was  
pronounced against ~~man~~ was delayed

beyond the day of his apostasy, but the  
causes which finally produced it began  
to act upon his system as soon as he  
lost the image of his maker. Every  
element in nature took part with  
his offended creator, and conspired to de-  
stroy ~~his~~ life. This operation for  
a while was <sup>fumble and</sup> ~~extremely~~ slow. Hence  
we read that man for the first 2000  
years after the fall, attained to the

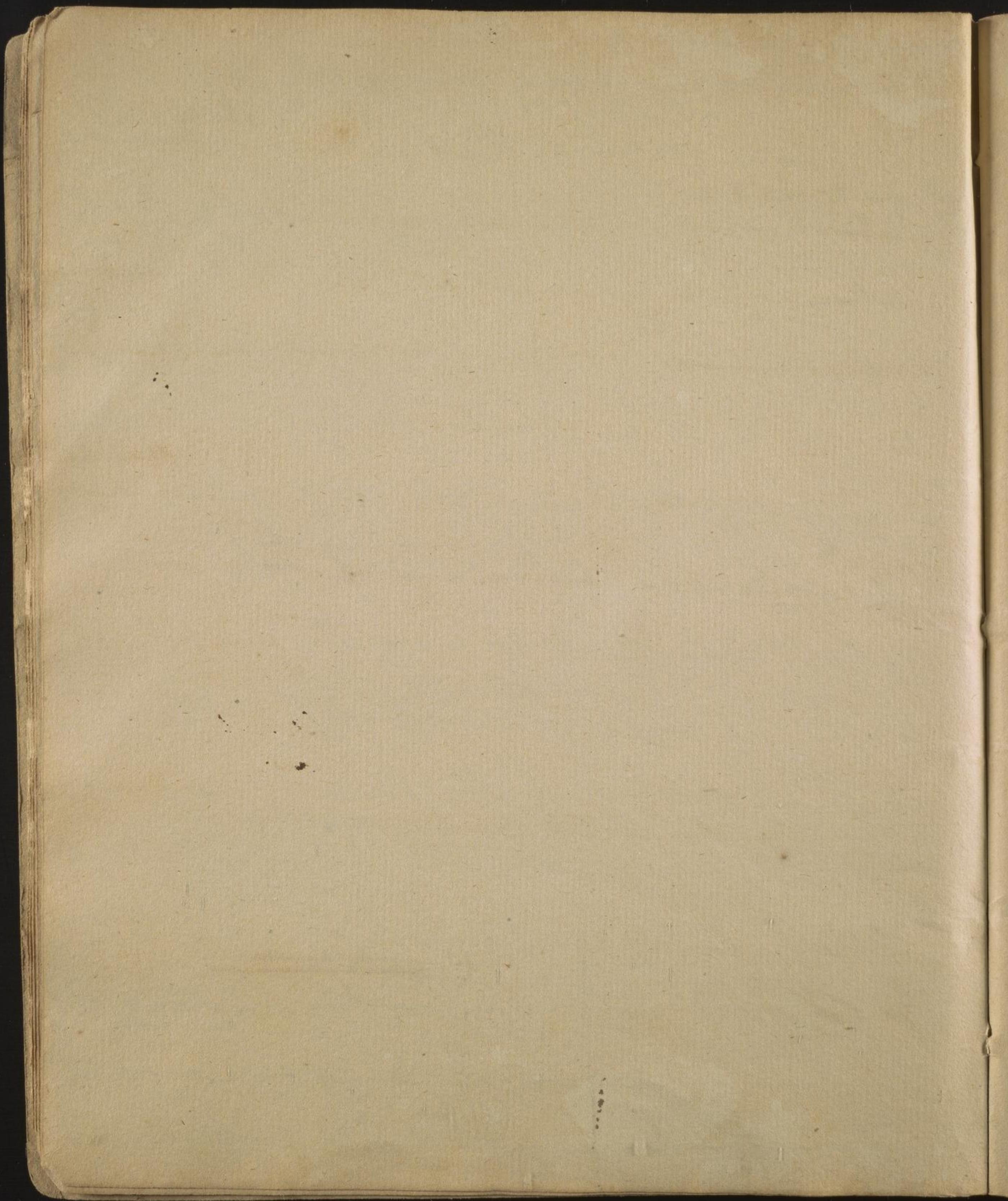


It was  
 great age of nearly 9000 years. It ~~and~~  
 seems not till after the deluge that the  
 life of man was contracted to its present  
 limits. many causes have been supposed  
 to have produced this change in the duration  
 of human life. — One of the most common  
 & powerful has been the influence of the  
 Deluge on the surface of the earth & upon  
 the temperature and quality of the  
 atmosphere. ~~But other causes seem~~  
~~to have combined with them, for not~~  
~~such alterations were made in~~  
~~the world as could be produced by~~  
 only the sea earth, — and air, but  
 the sea — all our abodes & dwellings —  
 insects — and ~~crests offering~~  
 — all our occupations; & pursuits — even  
 wild & domestic animals — may  
 even our very pleasures, all seem to  
 have taken part with ~~the~~ the offended



majesty of heaven, to <sup>4</sup>  
Satan, and have conspired to destroy  
the life of man. That life is <sup>"the effect</sup>  
of impulsion  
~~it~~ therefore, and preserved only by the  
operation  
acting of counteracting stimuli ~~appar-~~  
~~to be to be no less consonant to religion,~~  
than to true Philosophy. — It would  
seem as if the principle or quality <sup>that has</sup>  
been <sup>the offspring of</sup> called life was ~~consciousness of~~ a constant  
Strife, and that it owed its existence  
for 20 - 30 <sup>or 100</sup> years wholly to the tem-  
porary victories of the stimuli formed  
in the battles upon animal life,  
generated over the causes which  
conspired to extinguish it. —

In ~~Upon~~ entering upon the history of  
the numerous & distressing diseases to  
which the human body is exposed, we



Let us not

5

~~we would not~~ arraign the divine good-  
ness, or suppose that the benevolent father  
of the human race delights in the  
misery of his creatures. This is so far  
far from being the case, that ~~wounds~~<sup>diseases</sup>  
are all blessings in disguise, and  
in the present imperfect state of hu-  
man nature are absolutely necessary  
to individual as well as to general  
happiness. To ~~so~~ console us under a  
view of the melancholly ~~list~~<sup>chart</sup> of human  
misery from this quarter which I  
shall shortly lay before you, I shall  
briefly mention the important  
uses which diseases are probably  
intended to answer in the present

V<sup>2</sup> Diseases have been the means  
not only of impelling us to  
the study of Anatomy, but of  
promoting Physiological knowledge.

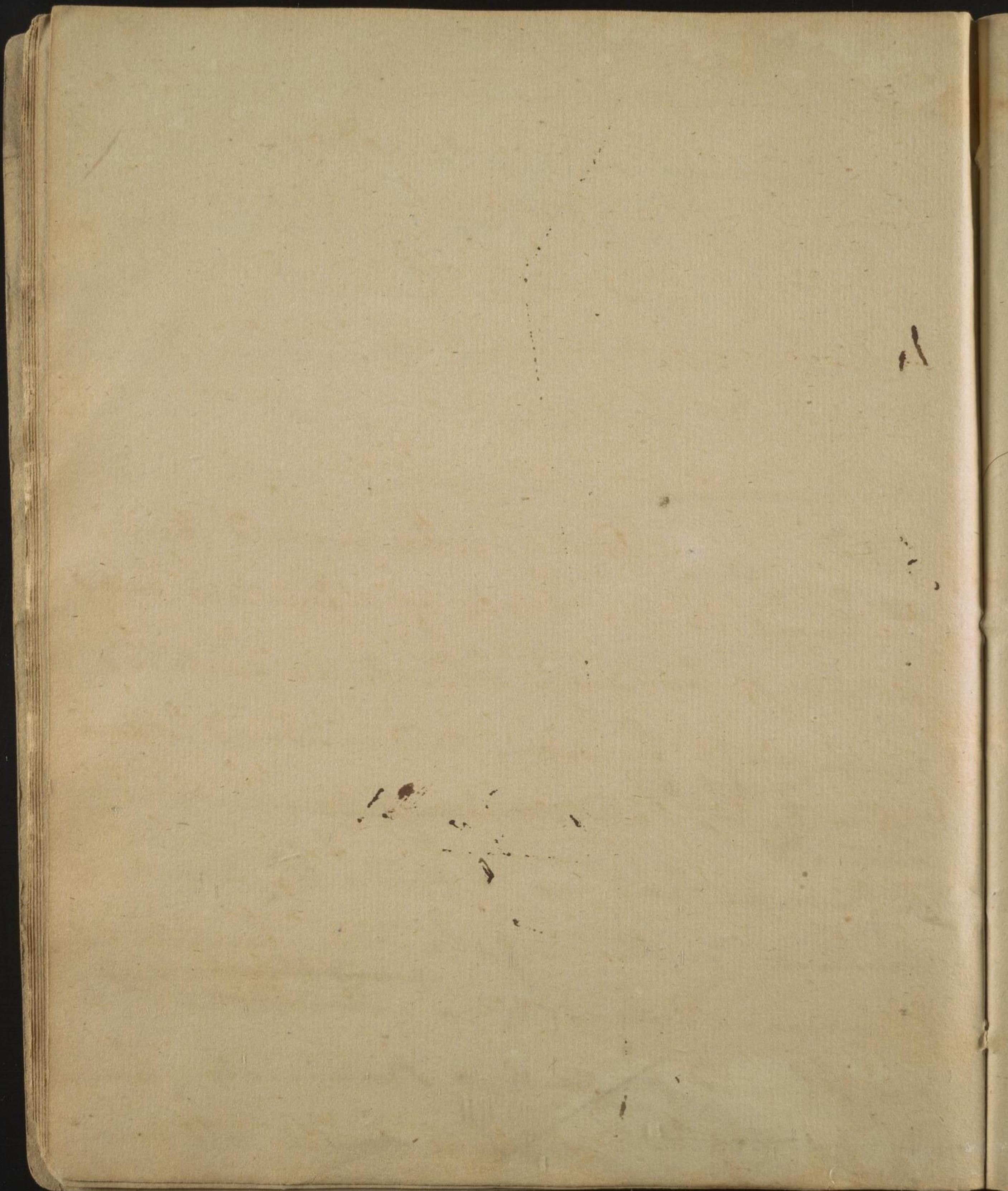
- By examining the actions functions  
of the body in a diseased state,  
we become acquainted with their  
natural actions in a healthy state.

+ in order to discover ~~remedies~~ in  
them for the cure of those diseases, and thus  
<sup>thus</sup> render ~~us~~ make us acquainted with  
Botany, Chemistry & natural history.

## State of things.

1 Diseases lead us to the study of Anatomy, whereby we are led to admire the wisdom & and goodness of the Supreme being who is manifested in the structure of the human body. without such objects as the removal of diseases, or the preservation of health, who would ever submit to the task of dissecting dead bodies, a business which is entered upon with horror, and rendered tollerable only by habit. ~~or mepity~~. — V

2 Diseases lead us to study the works of creation in the vegetable - animal & mineral kingdoms. ~~+ and thereby and~~ without them we should have no Botanists - Chemists nor Naturalists. These have all been



Physicians without whom the works  
of nature in these kingdoms would  
have been explored unknown and  
unadmir'd by the children of men.

4 Diseases furnish excellent opportu-  
nities for the exercise & improvement  
of the mental faculties.

5 There would have been but few  
opportunities without diseases, for the  
causes of that humanity & benevolence  
which are the perfection of our nature,  
& which cause us to resemble the  
great father of ~~men~~<sup>the Universe</sup>. Hospitals &  
dispensaries include a large portion  
of human misery. If these were  
abolished, human virtue would  
languish for want of opportunities

the  
Y more ~~they~~ often under death  
desirable <sup>to</sup> relinquish  
too. Did we ~~quit~~ our present  
comfortable residence in this world,  
in the full enjoyment of health, and  
of all the blessings that are connected  
with it, death would be <sup>in prospect</sup> terrible to us  
beyond the possibility of enduring it, but  
~~are kindly sent to~~ diseases, <sup>which</sup> reconcile us to its ~~appro~~ death  
may more ~~than~~ often under it desirable. But  
Diseases <sup>by</sup> the pains & suffering which  
they create in our friends, reconcile us  
likewise, & sometimes even ~~more~~, <sup>to their</sup> death, <sup>which</sup> often

to display the celestial virtue of charity.  
As the painful heats of summer, &  
cold of winter, are necessary to under  
the temperature of spring delightful,  
as darkness gives charms to light; as  
deformity renders beauty captivating,  
as evil is necessary to lead us to  
good, and as error serves to enhance  
the pleasure of discovering truth, so  
in like manner diseases are necessary  
to impart a relish for health,  
~~The diseases left <sup>proper</sup> ~~and~~ <sup>the</sup> ~~most~~ <sup>continually</sup> helping~~  
~~reconcile us to death, may~~  
~~our passage out of the world help~~  
contribute to the sufferer, & his dis-  
tributing to the survivors  
~~the~~  
~~greatest~~ ~~diseases by this physician.~~

cause us to look with solicitude <sup>for</sup>, & to  
rejoice in the moment which by terminating  
their present existence, <sup>shall</sup> put  
an end to their misery.

V ~~proves~~ conduces very much to ~~the former~~  
~~tion~~ promote Vigor and Activity of mind --  
it informs us, in many cases of the feats  
of Diseases - and above all it is <sup>so much</sup> the harbinger  
or sign of Diseases as to impel <sup>to</sup> people to  
desist from ~~the~~ such pursuits as would  
encourage ~~these~~ Diseases themselves, & to seek ~~for~~  
~~good~~ rest or medical aid for relief:

~~It is a remedy in many diseases.~~

~~How the good~~ beneficial effects of pain ~~are~~  
best seen in the fatal or distressing effects  
of those Diseases in which pain is not  
an early constant symptom, - These are  
Cancers - Consumptions - Chronic Inflamm.<sup>2</sup>  
of the Liver - and frozen Joints. - In the

9 Diseases by their physical  
influence upon the moral faculties  
create and  
improve human virtue, and  
~~thus add to the general welfare of humankind~~  
happiness.

~~But to return~~

Hundreds and thousands of people have  
moral habits, and all the happiness that  
is connected with them both here, and  
hereafter to ~~associate~~ an attack of  
a violent - painful, or dangerous Dis-  
ease ~~= A great passive virtue which is far more~~  
~~dangerous than that which is active. Only~~  
~~connected with thought~~  
~~more than~~  
~~introduction I proceed to the subject our~~  
~~not a great man Longfellow who can perform~~  
~~great things, as he is that can~~  
~~do a great deal of good~~  
10. ~~but only~~ ~~we have hitherto~~  
~~things combined~~  
mentioned the effects of disease & pain, but

pain alone has many ~~several~~ advantages,  
connected with it. It ~~is~~ is probably one of  
the first impressions of on the animal body  
in the production of life. ~~and~~ It certainly

last, the toes are often destroyed <sup>without</sup> before some  
pain, and the cold thereby permitted to  
affect the whole body <sup>with disease &</sup>  
death. With this short introduction I  
proceed to our pathology.

From the Universality, Certainty & Advantages  
of diseases, we are led to consider them as the  
~~a part of the natural portions of man~~ not  
as adventitious ~~and~~ incidents, ~~so~~ but as a  
part of the natural portions of man. ~~That~~  
~~is the common practice~~ we ~~commonly~~ feel  
this pain in our entrance into the world - & it  
is so universal, that we are disturbed when  
a child does not discover - may we not  
say when grown, ease

In entering upon this part of my  
course I am left without ~~any~~<sup>fewer resources</sup> guide.  
from books that my knowledge in medicine than from  
~~the best~~ ~~any other~~ facts there have  
been very other branches of medicine.  
been but few books published upon

Pathology. Dr Borellane began some-  
thing like a system upon it, - but  
his observations ~~upon~~ <sup>& Dr Hoffmann</sup> it are short  
& imperfect. Dr Haller, has given us  
but scattered here & there a few in  
his works a few pathological facts,  
but they do not amount to anything  
like a system. Dr Janberns has given  
us a system of pathology, but it  
is so filled with the humoral pa-  
thy of his master Dr Borellane,

V

p 11

There have been many definitions  
of disease. It would be a waste of time  
to mention most of them. But it is  
impossible to deliver one that shall en-  
-brace all the properties of disease in all  
its forms. The least exceptionable of  
any that I have met with is that  
which Dr. Sydenham has rejected in  
the preface to his works. It ~~is~~ <sup>is nearly</sup> as  
follows "Disease consists in the confused  
and irregular operations of ~~confused~~  
disordered and debilitated nature. You  
will I hope see the propriety of this  
definition  
When we come to mention the proximate  
cause of disease.

Subject of conversation among me

11

and with all is so concise, & obscure  
in many parts of it, that a student of  
Medicine can derive but little advantage  
from it. —

In the wilderness that is before me  
gent. I venture without a guide  
or compass. — I shall therefore  
pursue Indian ~~on water at my~~  
~~any~~ ~~endeavor to lay before~~  
~~the~~ ~~journey, this~~ ~~is before me~~  
~~system founded on my principles as to the~~  
~~way directed in my Physiology.~~ —  
By Pathology I mean that Science  
which treats of the ~~causes~~ <sup>Sccts - & Signs</sup> ~~of diseases.~~

These causes have been divided into  
remote - predisposing - exciting - and  
proximate. They are all limbs  
of one chain.

~~said, he did not believe that there existed such a creature as an Atheist in the world.~~  
" You are mistaken said one of the company, - rising from his chair ) — I am an Atheist."

~~Ignorantly absurd & equally bold would that man be thought to be who should in many Societies of physicians arise up and call himself a theorist in ~~the~~ medicine. In ~~the~~ assembly of the~~

~~This definition you set includes every deviation~~

~~Change in the system from <sup>moral</sup> beauty as well as physical ~~last~~ order. Fairly which I have~~

now the honor of addressing. ~~I feel no~~ it is no mark of courage to make that declaration composed of young gentlemen whose minds are as yet uncorrupted by ~~the vices of~~ ~~envy or the love~~ ~~of money~~; it requires no courage to make that declaration. I profess myself publicly a theorist in medicine. I came here to teach the theory of medicine, and ~~would~~ you come here to be taught the theory of medicine, or in other <sup>words</sup> to exercise your forenoon over the Burts in ~~reasoning upon the causes~~ ~~of~~ diseases.

To understand what is meant by a disease it will be necessary to observe that it is a deviation from that state of the human body in which all the functions of both mind and body are performed with perfect ease that is health.

[By a disease I mean a change in  
the proportion and order of the others in  
the place & quality & motions in the also  
the solids & fluids of the body. Has  
deficit - or fulness - or deficiency of  
any of these to effect the  
motion in the parts of the mind]  
Action in the parts of the body. — V ]

The causes of diseases are divided into two  
remote - predisposing - exciting  
proximate. They are ~~at~~ links of one  
chain - but sometimes ~~two of them~~  
so blended together as not to be dis-  
tinguished from each other. ~~and~~

✓ you are not to suppose that  
every disease is produced by their causes,  
in the order I have mentioned them ~~The~~  
~~remote and the exciting cause~~ or they  
are always independent of each other.

The predisposing <sup>causes</sup> & the exciting are often blended

together & act at the same time. E.g:

strong drink inducing  
Intoxication is often a remote & existing

cause of a fever. Predisposition to a disease  
however <sup>from debility</sup> is often so great as

not to ~~not~~ require an exciting <sup>external</sup> ~~cause~~  
to bring it into ~~form~~ <sup>action</sup>. The

- circulation of the blood, or a single act of  
the mind is sufficient for this purpose. ~~both~~  
& again - miasma - are the remote cause

of a bilious fever. The debility induced upon this  
~~system~~ <sup>weakens its</sup> system is ~~this~~ <sup>its</sup> predisposing cause. ~~for~~ <sup>This</sup> ~~but the~~  
debility is often aided by fatigue from exercise.

- Intemperance is its exciting cause, & a  
convulsive action in the blood repels its  
progressive course. ~~By proximate cause I~~  
~~were with Gambins "Ipso verbis" the disease~~  
~~itself.~~

I sometimes think ~~the disease cannot be cured~~  
~~but by removing the exciting cause~~  
 I shall briefly illustrate what I mean by  
 each of them. The alternate action of cold  
 is the ~~same~~ remote cause of ~~inflammation~~  
 debility induced by this cold is the  
fondisposing cause - the heat of a stone  
 worn, or of the <sup>violent</sup> sun ~~is the exciting~~  
 cause, - and a convulsion is the arterial  
 system is the proximate cause of  
 this fever. — The pain - heat - thin skin  
 are all symptoms <sup>or signs</sup> of the proximate cause.  
 The investigation of the proximate  
 causes will naturally lead us to speak  
 of their seats - These symptoms belongs  
 to ~~the practice of physic~~  
 no more of them <sup>&</sup> are necessary to

Before I enter upon the consideration of  
the ~~proximate~~ and ~~of the proximate cause of disease.~~

V By the proximate cause of disease I  
mean with Gantiers - "ipse morbus" - the  
disease itself. I am aware of the Objections  
to which this account of the proximate  
cause of disease is liable. But it is much

~~Q~~ ~~x~~ ~~The influence of certain customs  
common previously to, & after the birth  
of a child.~~

It is exceptionable that that which has  
been substituted for it - viz Excitability,  
for diseases I shall say hereafter ~~of some~~  
times come on without its intervention,  
or even the existence of ~~present~~ predisposing  
or remote ~~causes, as I shall say hereafter.~~

In considering the proximate cause  
of disease, I ~~speak~~ in former years I do  
as well as in my late publications I  
have endeavoured to avoid giving offence

demonstrate their seats & their causes.  
nor shall I ever mention the remedies  
which are proper to remove diseases  
except when I am ~~bound~~<sup>for the</sup> to do it ~~in order~~  
some purpose. In treating upon the  
subject of Pathol<sup>y</sup>. I shall follow the order of the  
syllabus. The following is the order I have  
adopted for my lectures on Pathology.

~~I Remote Causes. These will include  
the influence of the following circumstances  
on our bodies. 2 div -~~

~~3 Aliments - Food, insects and  
drinks especially in children.~~

~~4 Diseases~~

~~5 motion & rest - Flaps &  
wheals in cuffs.~~

~~6 Foreign matters introduced  
into the system. There are  
(a) Contagious.~~

~~(b) Poisons. —~~

by using as few new terms as possible; hence  
I have adopted <sup>some of</sup> the terms of Dr Brown. The  
use of those terms has "with different ideas  
annexed to them from those of Dr Brown, has I  
fear produced some Obscurity in my  
account of the proximate ~~cause~~<sup>but mostly</sup> of disease.

It has moreover exposed me to ~~scorn~~<sup>the</sup> &  
~~feel to be a responsible~~<sup>to</sup> epithet of being  
a Brownian. By superficial readers  
~~for which reason~~<sup>&</sup>  
~~To avoid both of these insults,~~ I shall  
endeavour to convey the same ideas  
formerly taught upon this subject by  
the use of ~~new~~<sup>general now</sup> terms which I  
shall hope will render my opinions more  
intelligible, and rescue me from the imput-  
ation of being a Brownian. That I have  
mentioned. —

go to p: 200!  
prop: I.

~~(c)~~, Worms. - pins &c

~~(d)~~ Anomalous substances taken into  
the alimentary canal - lungs & nose  
~~i.e.~~ Anomalous substances applied to  
exterior surface of

~~the body~~

~~7. G~~ & ~~the~~ The caps of motion & rest, sleep & waking.

~~8. F~~ ~~Paroxysms~~ of the mind & the sensual  
appetite. connected with which are

~~9. G~~ Different states of society

~~10. G~~ Different governments

~~11.~~ Different religions. —

~~12.~~ Different employments.

~~13.~~ Different amusements.

~~14.~~ Popular customs - as Tobacco &c

~~14~~ Different conditions in life as  
to ~~marriage~~ - & widowhood.

~~15.~~ Unhealthy supporters.

~~16.~~ an injurious confidence in

2  
2

Grasps & in the operations of nature.

17, The impudent use of certain remedies without or contrary to the advice of a physician, - as Opium - Bitters - with

~~the~~<sup>4th</sup> sympathy

18, Time - which always brings with it pain & disease. It was the only power the Patch King of Persia owned in his last illness. -

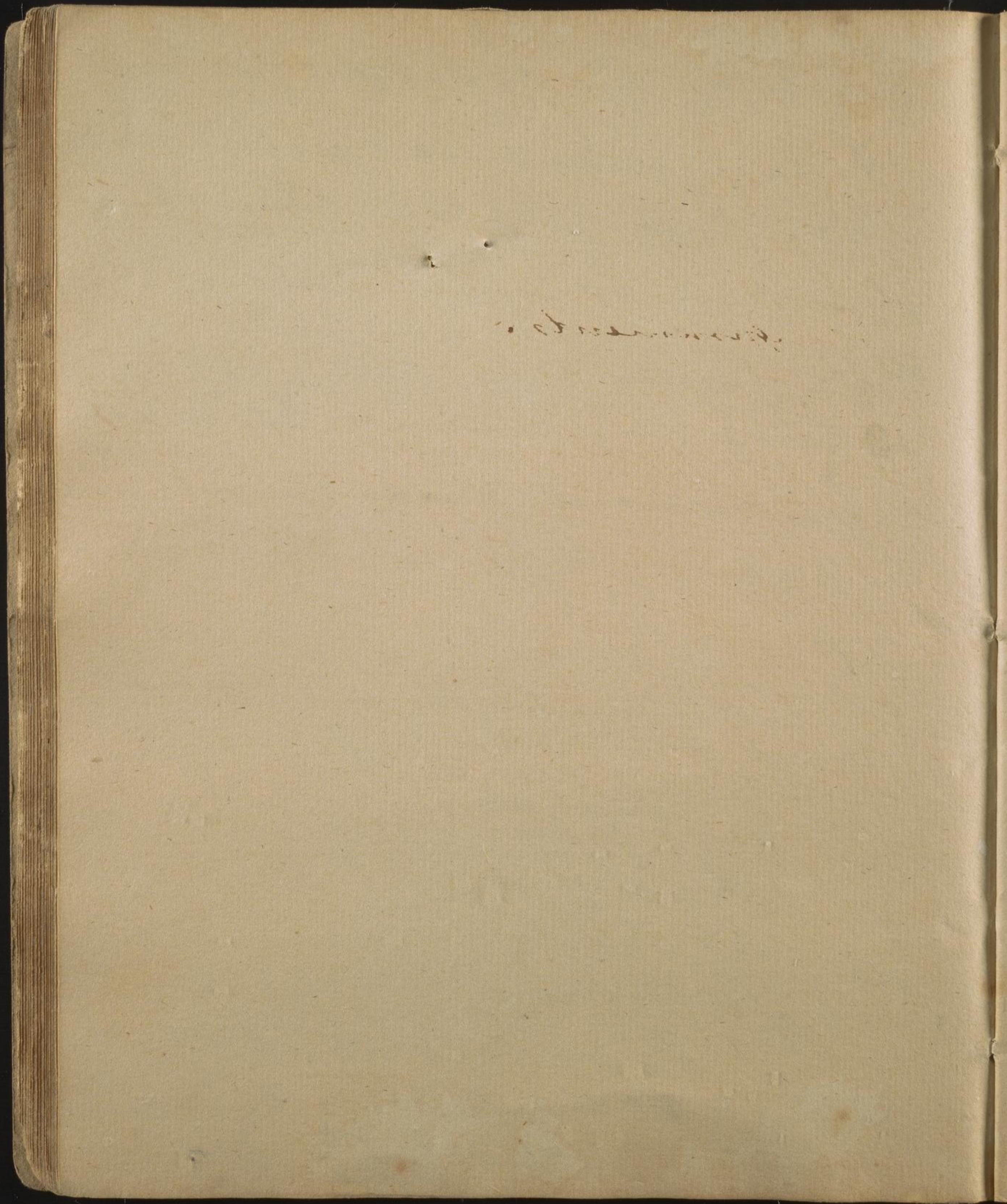
19, The predisposing causes of diseases natural or artificial - the first are, 1, Different ages as  
as pregnancy.

(a), Childhood

(b), Puberty.

(c), Adolescence.

(d), The period in which the artificial plethora yields to the venous supposed to be about 36 years of life.



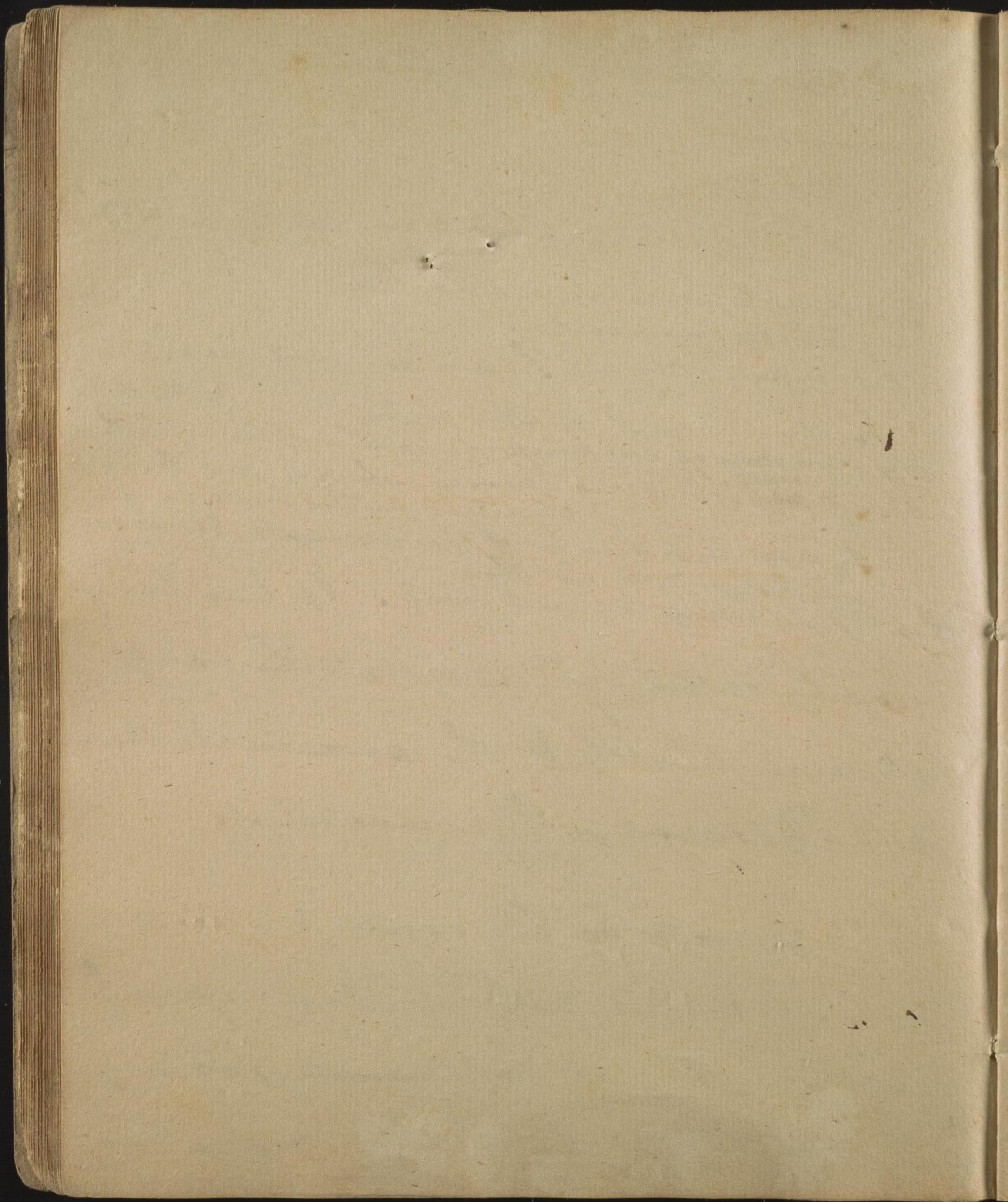
(b) the period of the <sup>17</sup> cessation of the  
processes. —

(g) Old age

(h) The different conditions of the system  
in single and married life  
temperaments.

(i) Deformity in size - or configuration  
of any part of the body. <sup>of the bdy.</sup>  
(k) <sup>or weak.</sup> Concourse of weakness of a part or of the whole n.  
The predisposing causes which are artifi-  
cial are all due to changes in the system as  
which have been produced by  
which have been mentioned. It has been  
happily called by Dr Brown - the range  
between health & the proximate cause  
of the disease or <sup>the</sup> disease itself. —

IT ~~will~~ <sup>be</sup> The exciting cause of  
diseases are - what ever acts upon <sup>the</sup>  
predisposition so as to excite producing  
disorder. All the remote causes may



becomes exciting causes render similar circumstances so as to set upon each other. E.g.: Fear may act upon the debility produced by intemperance so as to induce a fit of the gout. —

IV. The proximate causes of diseases  
are 1 general - ~~affecting~~ These affect the  
whole <sup>body</sup> ~~System~~ (a) thro' the medium of  
the Sanguiferous system as in fevers.  
(b) thro' the medium of the nervous system  
as in ~~convulsions~~<sup>all the diseases</sup> of the nerves from  
the highest convulsive disorder as Tetanus  
down to Asphyxia. —

(c) Thro' the medium of the Alimentary  
canal as Dysentery - Colic &c.

(d) Thro' the medium of the Lymphatic  
System as Dropsy & Scrophularia.

appear 1 in Pain.

- ✓ The signs of diseases, ~~are taken~~ counteraries,
- 12. ~~from the color of the skin~~
- 13. The teeth
- 14. Respiration appetite 5 the
- (5) The state of the excretions.
- 16. The pulse

(e) This is the medium of the blood, as  
in Scurvy.

(f) This is the medium of the brain as  
in all the diseases of the mental  
faculties.

2 They are partial or local - These  
affect (a) The skin. - (b) The lungs & trachea  
and the heart & arteries. (c) The lungs  
~~trachea~~ <sup>(e)</sup> The Senses. - (f) the brain,  
as the seat of wakefulness or sleep. (g) The  
Stomach & alimentary canal <sup>the</sup> (h)  
The lacteal vessels. - (i) The glands <sup>(k)</sup> (R)  
The organs of generation <sup>(m)</sup> (n) the Uterus.  
(o) every part of the body - in wounds  
& tumors.

3 Old Age

4 Death. — V.

to you are not to suppose that this link  
chain of causes occurs in every disease,  
or in the order I have mentioned them.  
There may be remote & proximate without  
<sup>only we admit</sup>  
& predisposing, — as in the small pox. The  
predisposing too often occurs without a  
remote cause — as the hemorrhage from  
the nose without <sup>in puberty</sup> ~~accident~~ <sup>intemperance or exercise</sup>  
kind. — Where ~~has~~ a remote cause  
acts on predisposition it should be consi-  
dered as an exciting cause] [Even  
the predisposition may be a proximate  
cause e.g.: ~~weakness from too much exercise~~  
~~or rest, is a disease.~~

This syllabus is as yet very imperfect.  
 I hope to give it to the public in a more  
correct state with a short text book of  
the lectures on Physiology next year.

In ~~the~~ enumerating ~~the~~ the diseases I  
 shall often be obliged to blend the remote  
 and exciting causes - & sometimes <sup>co</sup>  
 predisposing & provoking causes together.  
 & I shall often be obliged to refer <sup>to</sup> the  
 same facts under the different heads  
 of the causes. But this will serve only  
 to connect our system more closely  
 together, & to impress it more strongly  
 on your minds. -

Before I proceed to  
~~the~~ Inflammation by considering  
 our first head, - I shall begin ~~briefly~~

remote - predisposing  
& The <sup>debility</sup> and the proximate  
causes are here blended together in a  
close & quick succession. The <sup>debility</sup> ~~predisposition~~  
is evident from the languor - coldness  
~~lethargy~~ <sup>angust</sup> which <sup>precede</sup> ~~intervene~~ these diseases.

deliver a few general propositions.

~~I. Immutability of the system~~ ~~This we find all~~  
~~all diseases which are produced without~~  
~~any discernible cause~~  
~~by predisposition depend upon depend~~  
~~here~~  
on predisposing debility. I except, only  
those which arise  
diseases from ~~contagion~~ - wounds - and  
some local diseases. Upon the Certainty

~~Violence of contagious diseases increases~~  
~~till they have first induced debility.~~  
~~increased debility~~ ~~Do not act~~

~~Viz by Dr Brown to be~~ This debility is of  
two kinds. Viz direct. & indirect. To

understand the meaning of these terms it  
will be necessary to fix the healthy point  
of excitement in the system at a certain  
degree upon an imaginary scale. I shall  
choose for this purpose the no 50<sup>o</sup>: - ~~so as~~

~~Here~~ ~~the system~~ is stationary  
from an exact balance between  
stimuli and its excitability. When

~~The symptoms of both, are  
so exactly alike, that they can  
be distinguished only from  
their causes.] —~~

there is an abstraction of ~~from~~ the  
 system falls below  $50^{\circ}$  - ~~then~~ <sup>In which case</sup>  
~~direct debility is induced when there~~  
~~is <sup>great</sup> excess in the force or number of~~  
~~fibres~~ ~~indirect debility is induced.~~ These  
~~two species of debility~~ <sup>have been consid.</sup>  
~~as by Dr Brown, this is an error, for~~  
~~diseases, but ~~in general~~ they only~~  
~~predispose to diseases.~~ The predisposing  
~~may be confined to  $10^{\circ}$ : above below &  $10^{\circ}$ :~~  
~~Above the point of healthy exertion,~~  
~~when it <sup>descends</sup> ~~below~~ <sup>below</sup>  $40^{\circ}$ : or~~  
~~extends above  $60^{\circ}$ : it may be considered~~  
~~very near to~~  
~~as, an actual disease, ~~hinders the~~ <sup>for</sup>~~  
~~system from remaining long in this~~  
~~state of direct & indirect debility. - for~~  
~~It is a condition of the system that~~

~~of sudden diminution~~  
~~or the loss of excitement whether by~~  
Causes which produce direct or indirect  
debility is succeeded by ~~what is called an~~  
excitation of what is called Excitability - that  
is a disposition to be actuated <sup>by</sup> ~~on~~ with  
Stimuli ~~which~~ with ~~extra~~natural force,  
by stimuli <sup>or irritants</sup> which produce only natural  
motion in the healthy state. The more  
sudden the diminution of the excitement,  
the greater the excitability which is  
produced. There appears to a transmutation  
of excitement into excitability in the  
production of diseases, & the cure of them  
in many cases consists in nothing, but  
the conversion of this excitability back  
again  
~~back~~ by means of Medicine into ex-  
citement. - where debility whether direct  
or indirect has continued a great while

seldom fails to invite a disease of another  
kind to be ~~and~~ <sup>prove</sup> ~~invited~~ hereafter. #

~~But to return~~  
But to consider the ~~the~~ <sup>&</sup> existence of this  
malignant debility ~~in~~ <sup>& its consequent irritability,</sup> nearly all  
general diseases as the corner stone of  
my system of physic. I invite you  
therefore gent: to examine it thoroughly.

If you consent - ~~see~~ the whole  
fabric I have endeavoured to build upon it,  
must last tumble with it. — ~~I call upon~~ <sup>I shall</sup> ~~to attend~~

thus early to attend to the manner in  
which <sup>most</sup> of the remote causes to be described  
presently act on the system - and I think  
you will perceive that it is only in  
one way - viz: by inducing direct or  
indirect debility. #

# go to p: 23 I shall begin by mentioning

it is followed by a diminution of excitability as well as excitement, - hence the necessity of strong stimulating powers to call a fugient ~~conscious~~ charge of them to act upon the remains of the excitability. There appear to be certain latent resources for this excitability in the system - and so abundant are these resources that I believe few men die without carrying with them to their graves such a portion of it as would have lasted them for many years.

- Excitability & excitement are different proportions to each other in different stages of life. But more of this hereafter. - The <sup>in</sup> ~~destruction~~ <sup>total</sup> destruction of excitement & excitability is the proximate cause of death, or in other words, <sup>Death</sup> ~~animus~~ animal matter to a level with earth and other ~~dead~~ <sup>sensations</sup> of its power to emit those motions we call life. no more happens then to the

I shall begin by mentioning  
the influence of certain corrupt practices  
and customs which obtain in the treatment  
of infants, and these we shall find are  
of a debilitating nature. — and here  
we shall find the words of the poet ver-  
-ified. "A Child, the moment it receives its  
breath  
" Receives the lurking principle of death.  
" The fell disease, that must subdue at length,  
" Grows with our growth, & strengthens w/  
our Strength! — Even before it comes  
into the world it is predisposed to disease  
~~by~~ the debility it contracts from the  
indolence living — ill temper — amuse-  
ments — to hard labor — and penury of  
its mother, for few women pass thro'  
the period of pregnancy without being  
the subject of one or more of the

body in death, than happens to a bell  
or a violin when they are deprived by  
any accident of emitting sound, or  
musical tones. <sup>9<sup>th</sup> to 23<sup>rd</sup></sup> This is a bold proposition,  
but it follows from principles formerly  
established. - Let us never remember that  
are no half truths in medicine, any more  
than there are in Government. <sup>Vitality</sup>  
~~as absurd as Polarobility in a bell or Musically in an instrument of music~~  
Two (says Thales) we banish  
simplicity from every thing, even  
from that most simple of all created  
things - a new born infant.

I am led to support the opinion I  
have taught of the cause of animal life,  
as less by my religious principles, than  
I am by my principles in medicine.  
Life independent of stimulus, ~~consists~~  
forces us to admit a self-existent prin-  
ciple, which <sup>borders upon the univer-</sup> ~~is~~ ~~on other words~~

evils that I have mentioned. But  
 1. Children are often exposed & predisposed  
 by debility  
 to diseases from injuries received in pa-  
 tition from ignorant or negligent  
 midwives. —

2. The custom of washing the tender  
 flesh of new born infants with Ardent  
 Spirits - Wine - or even soap & water ex-  
 ates a predisposition to many diseases. They  
 all stimulate, & of course produce sub-  
 sequent debility.

3. The first diet of an infant is generally  
 of a debilitating nature. It is either ~~unripe~~<sup>Quantity</sup> in quality,  
 or of an unwholesome quality from the  
 mixture of Spices - wine - oil or oily  
 substances with it. By stimulating it  
 induces indirect debility.

4. The first dressings of Children are tight

55

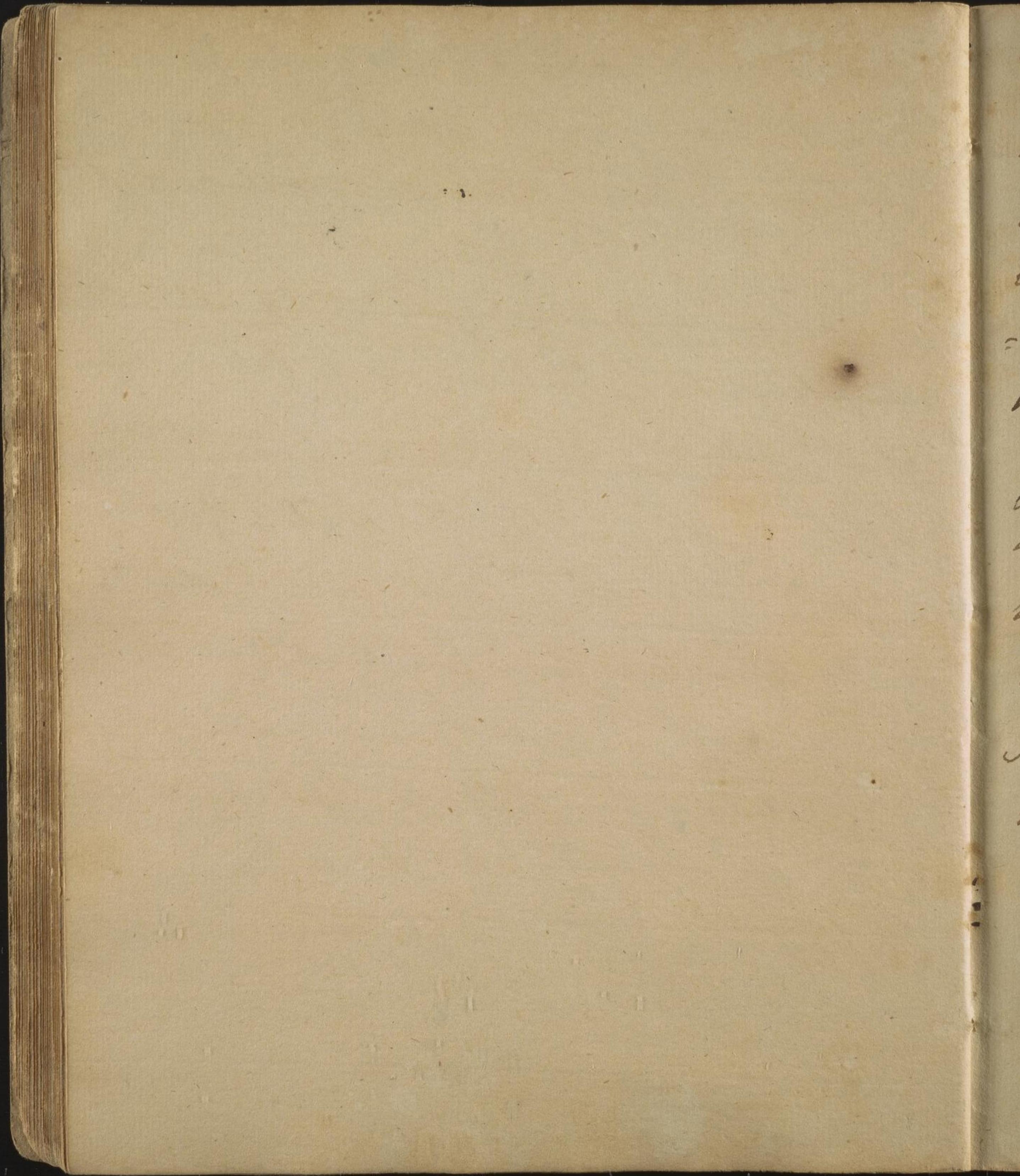
Supreme creator out of the question. It  
establishes the old Epicurean doctrine of the  
eternity of the world, for if motion or life can  
exist independant of remote causes or finality,  
I see no ~~more~~ difficulty in admitting the  
eternal existence of the world from a power  
inherent in & necessary to matter. But the  
doctrine I have delivered places the Deity upon  
the throne of the universe. It makes him  
what the poet calls him "the father of life",  
or what the scriptures more emphatically  
describe him to be "the only living & true  
God". It moreover places man in the  
humble situation of a dependent crea-  
ture - & indebted to ~~over~~<sup>over the</sup> all the elements for  
his existence every moment. - ~~He makes his~~  
~~life a vapor~~<sup>and justifies the</sup> comparison of his life <sup>to</sup> a vapor -  
or the grass of the field. - It shows him  
to be what Shakspear - "a mere thing,  
a poor - bare - forked animal".

26

Cups - evading Cloaths - stays - &c all  
tend to weaken the body & <sup>this</sup> predispose to  
diseases in every subsequent period of  
life.

5 The use of Spirituous liquors to allay the  
complaints of Children is a source of  
great debility, & subsequent diseases.

6 The influence <sup>or</sup> the milk of mothers  
negligent in their diet, or wholly devo-  
ted to pleasure is a fatal source of  
debility &  
disease. I once knew death from  
convulsions in a Child that had sucked  
a Nurse <sup>that</sup> had drunk <sup>too</sup> of Rum, &  
I have seen the Colic many times  
from Acid Aliment taken in too  
large a quantity by Nurses or Mo-  
thers.



7 The premature application of the mind  
to study in children & in particular to  
difficult - absurd - and unprofitable  
branches of learning, as also the confine-  
ment of children in close ~~school rooms~~<sup>School rooms</sup>,  
and the tyranny of Schoolmasters all  
become a source of bodily & mental  
debility &  
disease. I have been called to many  
hundred children who have been sent  
home sick from a crowded school, &  
I think I have seen ~~terrors~~<sup>a morbid irritability</sup> induced in  
the minds of children by ~~the~~<sup>being the</sup> subjects  
of a despotic Schoolmaster.

8 The amusements of children expose  
the body to many debilitating causes,  
such as jumping - falls - &c.  
~~worse of the time~~ They are moreover

~~V & Debility is acquired by all the usual  
stage of life by all  
remote and exciting causes of disease~~  
causes which lessen the natural excite-  
ment of System by the abstraction of  
~~the strength of the body, or by or action.~~

that is abstracting a portion of those  
natural stimuli which support life, or by  
reducing the excitement, and  
dissipating a portion of the excitability  
of the System by the gradual or chronic  
application of an unusual number  
of stimuli - or suffocating suspending  
it by the sudden application of  
stimuli thereby producing what  
~~a sudden~~ ~~I shall call~~ disruption of the System.

I shall enumerate the different  
causes which induce ~~both~~ <sup>all</sup> these  
kinds of Debility hereafter. ~~return~~  
natural or acquired is - to 10 : 15. 0

28

exposed to  
injuring falls from the arms of their  
mothers - to being pinched - hummed - or  
shaken by their nurses, or mothers. I  
mention of the cases of Hydrocephalus that  
I have known, have arisen from falls,  
or contusions on the head. I ~~have~~ have  
known one <sup>case</sup> from a stroke given to a  
child with a brush by a passionate  
mother - which terminated in death,  
~~easily acquired debility: go to 15~~ <sup>This native and</sup> ~~and~~  
~~full cold~~ now to inquire into <sup>Cirrhosis</sup> ~~of the Liver~~  
~~present~~ in producing diseases. It acts <sup>1</sup> by  
its sensible qualities. These are heat - cold  
~~wetness & dryness~~ <sup>Rarity and Density.</sup> ~~and~~  
by the suddenness of transition of one to  
the other, and by local situations - and  
certain seasons and months. <sup>2</sup> By the  
Air acts ~~power~~ induces diseases from

In Dr. to use the words of lately coined by  
Dr Miller of New York - "Koino-miasmatic"  
& "Idio-miasmatic" exhalations. — The  
former signify - exhalations from exposed  
or public places - the latter from private  
or personal sources.

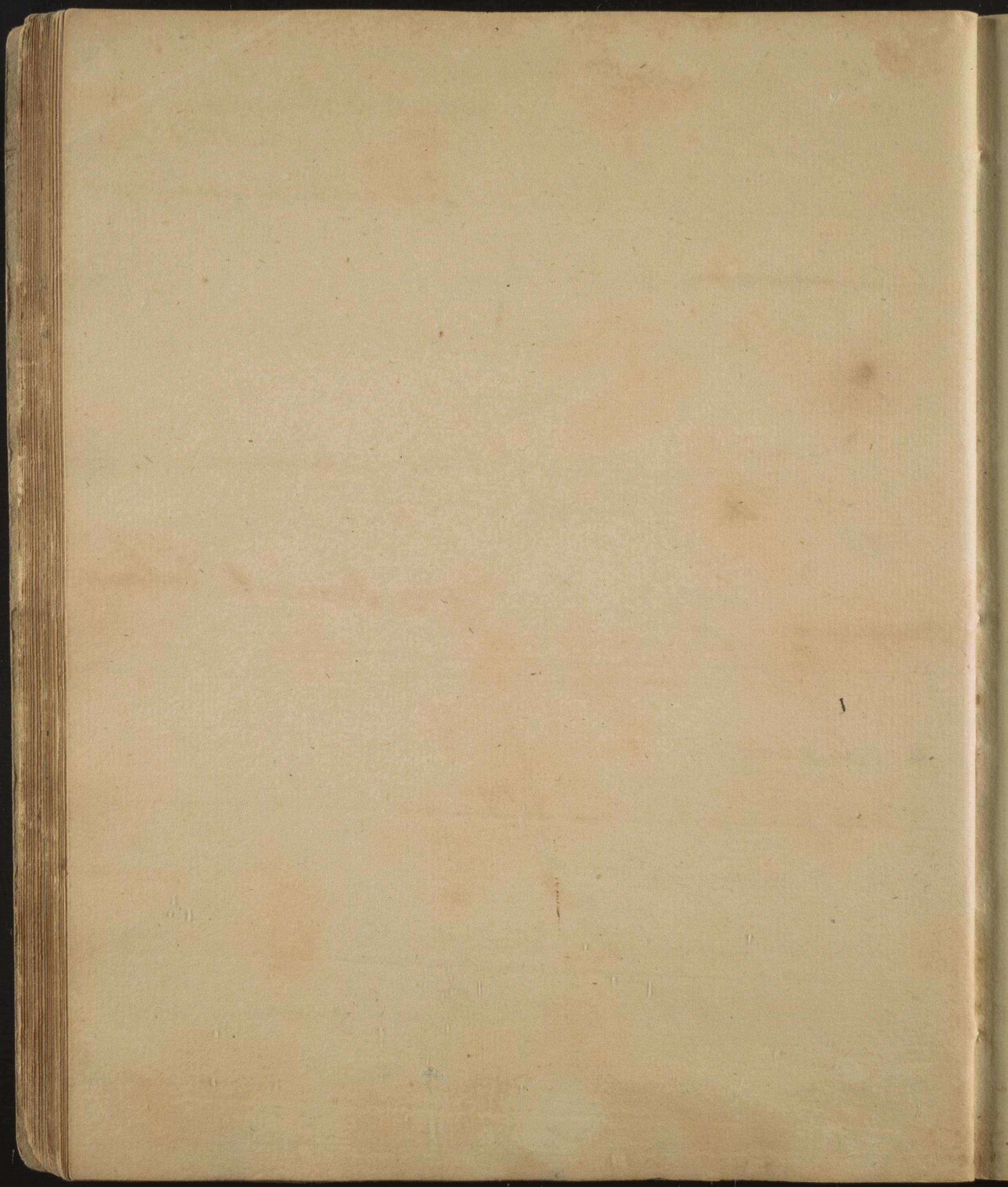
V In air in the air the properties of which  
are unknown, but appear in its effects  
upon the human body. and many other  
as yet unknown matters.

This is a most important subject,  
and should command your closest attention.  
From the sensible or insensible qualities  
of the air, are derived nearly all febrile diseases,  
and there is scarcely any other disease that is  
not more or less influenced by them.

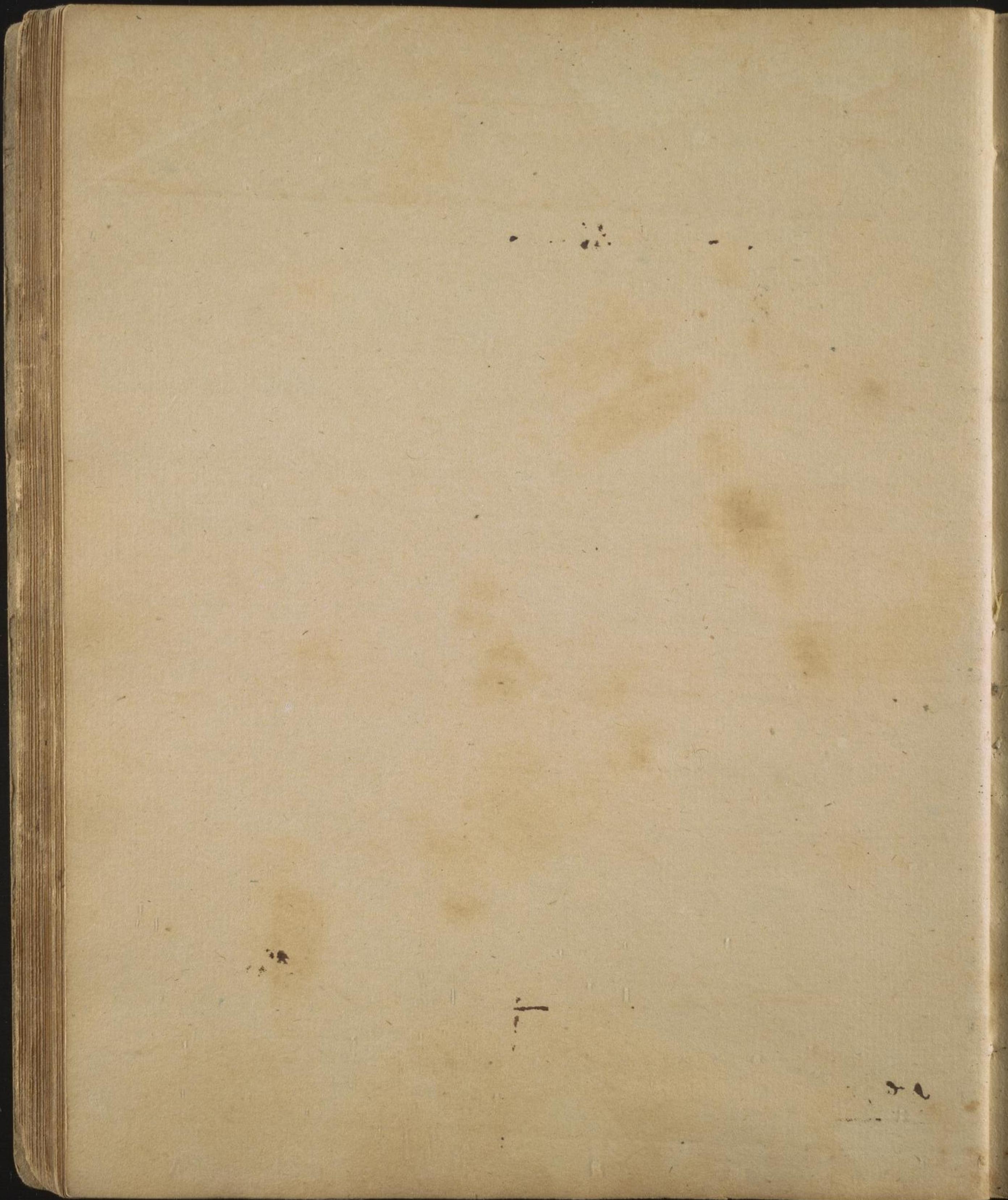
certain impregnations <sup>which</sup> are mixed w:  
it - these are 1 miasmatha - 2 for the air  
which has been destroyed by respiration.

~~3 Hydrogen~~. 3 from iron - or Manhattan  
winds. 4 the smoke of certain burnt  
kilstones. 5 the effluvia of manufactures.  
6 the respiration of plants. 6 to one more  
not to be lost under any of the above  
heads - mentioned by Brue viz: Janiel. ~~deletly~~  
~~Hydrogen~~ influence of the

1 of the insible qualities of the air. -  
~~effects~~ notwithstanding of human body  
is so formed so as to exist in various degrees  
of temperature of the air, yet there ~~are~~ are  
certain degrees of it which ~~are~~ most fa-  
vorable to health. Those degrees are  
different in different ages. From 62°  
to 75° in middle life are most salutary.



Beyond 45 higher degrees of heat become  
 unsavory and agreeable. — That is an  
 universal stimulant ~~but~~ to all animals,  
 and perhaps no animal exists without  
 it. Different degrees of it act on  $\gamma$  powers  
 of life in different ~~of~~ animals — hence  
<sup>is 32°</sup>  
 the freezing point, or for what we know  
 many degrees below it, may be to some  
 animals what 75° are to  $\gamma$  human  
 body, — for ~~as~~ heat & cold are both  
 relative terms — and the extremes of  
 both are as yet unknown, as well  
 as the full effects of both on animal  
 life. — There is however in every con-  
 stitution a certain degree of excitement  
 produced by heat, which constitutes its  
 healthy point. This degree is nearly



31

the same in prisons of the same age,  
and in the same ~~degree~~.  
- who run whenever the heat exceeds

This degree it always induces ~~indirect~~  
from action.

~~debility.~~ But this degree of heat ex-  
- citement is varied not only by age, but  
by the ~~heat~~ temperature of the weather  
which has preceded it. I once knew  
~~77°~~ [on the 17<sup>th</sup> of March 1791] produced  
universal languor in the citizens of  
Philadelphia from indirect debility. The same  
degree of heat would have been gently  
& gratefully stimulating had they oc-  
- curred in the months of July or August.

This ~~the indirect~~ debility induced by  
heat shows itself in the following ~~ways~~  
ways. In the arterial system it produces  
languor-excitability, & a disposition

V 2 Heat acts when impinged with the  
Solar rays in a peculiar manner on  
the brain - producing it is called Insu-  
lation. This is sometimes suddenly  
fatal - but ~~where the insulating ability~~  
according to Dr. G. D. Lister's view of the  
is overcome it ends in a ~~long~~  
modic disease in India - 1. a synchia  
~~inflammation of the brain~~  
fever - 2 a Phenomenon - 3 Insaneness -  
and 4 in its highest degree cold sweat  
convulsions & death. It is remarkable this disease  
is unknown in Africa from the uniformity of its heat, & in-  
Dr. Robert Wilson relates many curious &  
facts of the effects of the warm air 116° in Egypt  
upon the British Officers & soldiers. It produced  
difficulty of breathing - spitting of blood, & falling down also  
blindness, or false vision such as the sight of  
camels - horses, & all kinds of animals  
moving before their eyes. It was always  
increased by standing still, & lessened by  
motion. Eating increased it. D

to be acted upon by all the causes which induce fever. At 80° it is most disposed to produce malignant when long protracted. discovered by Dr Caldwell.

If upon the nervous system it produces

excitability, & a disposition to be acted on by all the causes which produce convulsion

& syncope - hence the greater frequency

~~of tetanus~~ Hysteria

in warmer climates, & warmer weather than in cold, - hence also the

frequency of fainting in the same countries & seasons. Heat beyond the healthy

point of excitement dulls the sensation of

~~It even affects~~

touch ~~and vision~~ - hence we read with

difficulty in hot weather). It affects the

giddiness

brain with sleepiness in the day time,

and when less stimulating so as not

to produce ~~general depression~~ - it produces

wakefulness in the night.

If heat acts upon the muscular fibres

v leads with also an indisposition to voluntary motion. - hence it is said exists a necessity for domestic slavery in all hot countries. -

Heat acts upon the sympathetic system - disposing it to work more than usual - hence weakness in going to a warm climate.

This sweat has a saline taste. It is a well Rupian officer who had travelled a great deal <sup>in warm countries</sup> informed me y: had never seen any person discharge sweat from the back of the hand till he came to America. It is remarkable this sweat removes the marks of the smallpox - many years afterwards.

+ Heat produces eruptions or small boils on the skin. This I have often observed in hot Summers especially in Children. Burnis takes notice of

first activity <sup>pink</sup> thin 33 languor & weakness  
and produces in them <sup>involuntary</sup> ~~weakness~~, <sup>Tetanus</sup>  
~~conscious~~ particularly ~~weakness~~ disposition to all motion & ~~ease~~ <sup>difficulty</sup> of  
it is said of Domestic Slavery in all hot countries.

5 Heat acts on the Stomach and alimentary  
at first according to Dr Clark except, afterwards  
canal - producing in the former  
more especially for fresh animal food,  
want of appetite - and in the latter  
a disposition to Colera & Dysentery.

6 Heat acts on the ~~Bile~~ skin producing in  
a certain degree profuse discharges by  
it produces sweat, & for a higher degree <sup>last</sup> a universal  
dryness. This sometimes occurs in  
reapers, & unless relieved is always  
followed by sickness & death. This dryness  
of the skin is often lost on by sleeping  
in the open air in the shade in the  
East Indies, and generally arises in  
the Hepatitis of country. Heat  
further - discharges the white from

sance effect from heat in the East Indies. The  
~~ipso~~, & precisely heat of hot climates  
- ates are sometimes produced by it, but they  
sometimes depend as I shall say

hereafter on another cause. — <sup>that gives</sup>  
the finds in suns - a centrifugal determination - hence  
bulbs & other dwellings in the plagues - & not in cold climates,  
& this brown or dark color is brot on  
the skin only by the heat of the sun. Hence  
we observe Fairths & Cooks to be as fair  
as other people. the fairer the skin, the  
less apt it is to acquire a dark color  
from the ~~heat~~ <sup>rays</sup> of the sun. The color  
of the Blacks has been ascribed to the rays  
of the sun. It is certainly one of its causes.  
But several other causes concur to produce  
it, as diet - disease & state of society. no  
difference is perceptible between <sup>the children of</sup> white & black  
parents till 8 days after birth except in the  
scrotum and glans penis which at birth  
are of a dark color.

the color of the skin, and dispenses it to  
brown or dark color.  $\checkmark$  ~~to 14. 10. 37.~~ or  
~~bring it in under this  
head.~~

Heat invigorates the animal appetite.  
Hence the early marriages <sup>of females</sup> - and  
the late fruitfulness among males <sup>in</sup> w.

seen in warm climates. Count  
Kraemer who lost his life for attempting  
the <sup>striking</sup> treason against the  
present king of Denmark says in  
his confession that he had formed a design  
to settle in the East Indies ~~on~~ purpose of  
he might enjoy in a higher degree this  
animal gratification. It is a curious  
fact that this appetite should flourish  
under ~~the shadow~~ <sup>a workshop</sup> of every part of the  
system I shall hereafter mention.  
Some facts that show <sup>in</sup> it exists with  
peculiar force in <sup>the</sup> direct as well as in

57 The effects of heat on the ven. appetite,  
in middle latitudes in  
appears from the greater number of births  
which occur in the winter months than  
in any other season of the year. Dr Boerhaave  
supposes from this fact, that longevity is  
connected w<sup>th</sup> birth in cold weather, - but  
if more persons had lived to be old, who  
were born in winter than in other seasons,  
it is owing to the greater the number of  
births in <sup>the</sup> season <sup>in</sup> any other. In regard  
to the influence of the annual sun in pro-  
-

- gating his species, I can sinks for a while  
lowest part of the animal  
to a level with the ~~water~~ elevation. Fish  
are influenced by <sup>shortens</sup>  
feels it the most of any animals  
I heat by increasing perspiration <sup>and</sup>  
the duration of the tide  
the discharge of the menses in women.

10 Dr Pinckard remarks a singular  
fact of the effects of heat in the West  
Indies upon the body with respect to

X

The indirect state of debility of the system  
 increases the periton & excretion of bile.  
 Heat acts on the blood dissipating it to  
 I say dispersing to putrefaction only, for  
 a slapta putrefaction. This putrefaction  
 is prevented by the bile according to Dr.

Waring - whom it is related more

plentifully in hot weather than cold,  
 & hence putrefaction according to Dr. Waring  
 may stop. Strange that the  
 experiments does not take place in the blood.

Product of a putrefactive process should  
 check the further progress of putrefac-

-tion. But this is nothing new in the  
 works of nature. <sup>Nitre</sup> the offspring

of the putrefaction of vegetable & animal  
 matters preserves both of them from

putrefaction & the green waters w<sup>ch</sup>  
 appears on stagnating waters, are

vegetable productions which yield a  
 purificated air which ~~salado~~

Sleeps. He says no Drowsiness overcomes  
it in the morning & hence he says "to  
wake & to rise - are the same thing" in  
the West India Islands. —

the air which exhales from ~~the~~ purifying waters. — What makes Dr Mung's theory more probable is, that the bitterness of the bile — now bitterness we see produced by putrefaction in the rotten parts of an apple, and of many other fruits. ~~This has often been remarked by Butchers in the cattle they kill in the summer months.~~ — Sometimes this bile is expensive in quantity — or expensive in its aerinancy, ~~in both cases~~ & sometimes it finds its way into the stomach — in all which cases it produces diseases, hence the frequency of complaints of a redundancy of bile in warm climates. But it produces diseases more frequently from being vitiated by a mixture with marshy matter — hence the frequency of bilious fevers.

14<sup>th</sup> Heat acts upon the eye sight - hence  
the frequency of Ophthalmia - Gatarek.

& gutta serena in warm countries.  
Ophthalmias were very common in  
the warm dry summer and autumn  
of 1793. They are universal in Egypt.

15<sup>th</sup> It acts is less unfriendly to old than  
young people - hence the practice of  
the old Romans & modern Portuguese,  
of retiring to a warm climate.  
But when so intense as to produce  
great debility, it is often suddenly  
fatal. - It is a cause of many dis-  
eases in children especially under 2 years  
old. Hence  $\frac{1}{3}$  of all who are born die under  
<sup>+ period</sup>  $\frac{1}{3}$  <sup>th</sup> ~~the influence of~~ ~~time of life.~~

Under the head of the effects of heat upon  
the body, I shall include the influence of  
what are called the syroco winds. These ~~blow~~  
are common in Aleppo and in some  
parts of Italy. They derive their heat from  
baping over immense beds of sand heated  
by the sun. They are extremely debilitating  
and dispose to many diseases. Brydone de-  
scribes it as having occurred at Naples while  
he was there, and speaks with great pity &  
contempt of an Italian mosquito whom  
he met with a morning walk supporting  
himself under the pressure of this air by  
means of a snuffing bottle. —

15 and lastly the influence of = p 38-

in sometimes exposed to those exhalations  
V - stores.

17<sup>th</sup> Heat, by producing indirect debility acts  
upon all the faculties of the mind, producing  
weakness in the <sup>memory -</sup> understanding - and the  
moral faculties - perhaps the imagination  
is not impaired by heat - It <sup>is probably</sup> may be  
invigorated by it. Buffon says that  
hot climates weaken genius, & check  
invention, but that they encrease the  
powers of imitation: This seems to de-  
pend on a corrupt state of the faculty  
of taste. <sup>By the longer it induces on</sup> ~~the body~~ mind - it disposes to the use of Opium -  
<sup>to bays - strong drink. of the Absolutes</sup> Thus far have I spoken of heat  
acting in ordinary cases without  
any previous particular consideration  
Let us next attend to its relative effects  
in the system. But when the system

~~effected only by the heat of the sun. No other heat produces it. Hence Smiths & cooks are as fair as other people. the fairer the skin, the less disposed it is to acquire a brown color from the rays of the sun.~~

= heat extends so far as to lessen the density of the solids of the body - hence even under equal circumstances of <sup>height & bulk</sup> ~~years~~ of when weighed in the opposite scale a Chinese or a Hindoo is always heavier. <sup>the bones of a person</sup> considerably ~~less~~ than the bones ~~of a person~~ specifically who has lived & died in a warm climate are specifically lighter than the bones of a person who has lived & died in a cold country. —

~~Basing in here the effects of gross  
Winds in 1262<sup>o</sup> 3.~~

38

has been previously exposed to cold, it acts more certainly, and with ~~increased force~~ <sup>varied by</sup> ~~proportioned to the dispropor-~~ ~~tion between the temperature of the~~ body and the heat which is applied. I once knew 77° on the 17 of March 1791 produce universal languor on the citizens of Philadelphia from ~~indirect~~ <sup>ability and desirability</sup> The same degrees of heat would have been gentle, & gratefully stimulating had they occurred in the months of July or August. — Inflammations seldom fail to follow the sudden action of even moderate heat when it has been preceded by cold. ~~This~~ <sup>Shows</sup> the frequency of these fevers in the Spring, & in open winters. The old saying that ague

+ This is the case in the nights in Surinam after  
a day in which the ~~Temp~~ Heat stood at  $85^{\circ}$  - the  
coldness of the air was ~~the~~

✓ It is equally remarkable that  
the weather which becomes moderate  
from being very hot, excites the sensation  
of cold & produces diseases <sup>+ above</sup> ~~This~~ was  
fisibly felt at Naples by Bydone  
when the ~~Temp~~ heat after a syrocco sud-  
denly fell from  $112^{\circ}$  to  $80^{\circ}$  Dr. Fordyce  
felt it exquisitely coming from  $100^{\circ}$  to  $45^{\circ}$  similar facts  
by Humboldt when it fell from  $90$  to  $80$ . ~~by sympathy~~  
the sudden abstraction of heat

Often induces fever either by  
increasing perspiration, or 2 moving  
the action <sup>of</sup> some other stimuli<sup>g.</sup>  
in the yellow fever. The coolness of the  
night air after a hot day produced in  
the soldiers who marched from Suez to  
Cairo, such a numbness, <sup>infusing lings</sup> that they  
were scarcely able to move the mor-  
ning afterward. 3 Destroying the Equi-  
librium of the system, &

Christmases, or a ~~time~~<sup>39</sup> in which the ground is covered w<sup>th</sup> verdure, makes a fat Church yard in the Spring is certainly well founded. I have several times observed it in this city. ✓

It is remarkable that weather ~~un~~<sup>further</sup>  
formerly warm & dry of itself <sup>of itself</sup> produces diseases.

- It is only when it is varied alternately  
with cold or moisture that it is most  
unhealthy. The most healthy summer  
I have known, have been the warmest.

The summer of  
the year 1766 in Rome we is  
placed upon record as an uncommonly  
warm season. I yet saw the person  
who describes the heat of that summer,  
our town was uncommonly healthy,  
all our hospitals were nearly empty.

thus inducing a fever without the co-operation of an irritant, or exciting cause. ~~extreme cold at~~ ~~extreme heat~~

~~It has been remarked that the body suffers much less in passing from extreme heat to cold, than from~~

But the Autumns which follow those  
hot summers are ~~generally~~<sup>often</sup> marked  
with bilious & ~~soft~~ diseases. — It is  
thus we see diseases are generated  
in one season, & produced in another.

Again. ~~This unmerciful practice that~~  
~~heat~~ <sup>when</sup> ~~produces~~ long applied to the  
body, produces the same insensibility  
to its cold, that it does to itself. The  
~~West Indians~~ bear the cold of our  
climate for a year or two better  
than our natives. It is commonly  
said that they require a year or  
two to be cooled after having been  
exposed for a number of years

V How shall we reconcile this fact with  
the sudden painful sensation of cold  
felt by persons ~~on~~ <sup>passing</sup> from a heat of  
 $112^{\circ}$  or  $100^{\circ}$  to  $80^{\circ}$  formerly mentioned? I answer  
in this case the transition is always  
sudden whereas by the heat, & the  
transition to the ~~heat~~ or rather  
below it, is so sudden as to produce  
the sensation of cold. In the case of the  
West Indians the insensibility to heat is  
blunted, by the long applications <sup>under a</sup> of vertical  
sun, and the cold of our climate is ap-  
plied so gradually to their bodies, as not  
to destroy this insensibility for two or three  
years.

Upon my giving this solution of the  
above phenomena to Baron Humboldt  
in his late visit to this city, he com-  
municated to me the following fact. 300  
men work every day from morning till

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to the intense heat of a vertical  
sunburn.

In producing all these effects on  
the body, the heat often rises  $10^{\circ}$  &  
even  $20^{\circ}$  degrees above the ordinary  
heat of the body; & yet life is not  
extinguished by it. The reason of this  
I gave when I treated on animal  
heat.

If such be the numerous and  
morbid effects of heat on the animal  
body, it is natural to inquire <sup>why</sup> ~~how~~  
~~the Author of nature~~  
~~the Creator of the world placed man~~  
in immediately after his creation  
in a warm climate, and why

During  
days in a mine was made 1900 feet below  
the surface of the earth, in which the temperature  
of the air is at all times from 100° to 102°. They  
come out of this mine in the evening, & pass  
the night in an atmosphere in which the  
heat is between 40° & 50° yet they never take

It was in similar climates that  
men have attained to the greatest  
degree of longevity.

Cold, ~~and~~ more they  
enjoy good health. This insen-  
sibility to the sudden change in the atmosphere  
must be ascribed to the intensity  
of the heat in the mine <sup>from time</sup> destroying all  
sensitivity both to itself, & to cold. —

Cold ~~sudden~~ certainly induces disease  
when it acts <sup>suddenly</sup> upon bodies exposed to an uniform  
heat, but not intense heat. ~~as~~ Its most  
effects are so general, that Dr. Murray  
considers every person in a West India  
Island as constantly exposed & disposed to  
disease from cold. Hence the heat at 80°  
predisposes so much in our Climate to yellow fever.

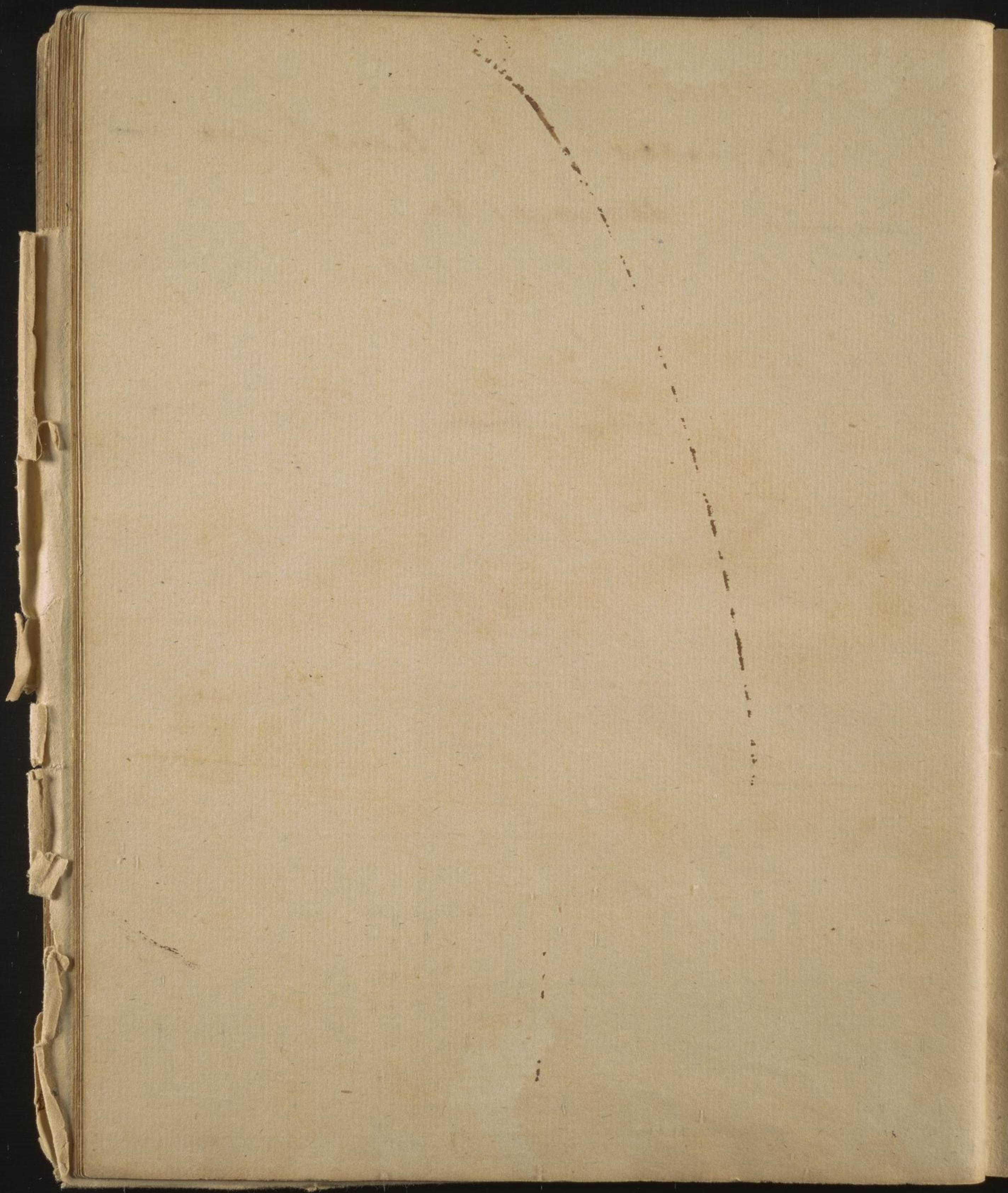
human nature has been more  
honoured, in hot countries than in any  
other parts of the world. Let us It was  
unhealthy  
in the immortals from Egypt, that  
Arts and Sciences acquired a perfection  
that has ~~ever~~ astonished all  
succeeding generations. To account for  
these facts it will be necessary to ob-  
serve that where men avail themselves  
of the aids of experience & of human  
reason, there is <sup>no</sup> climate unhealthy  
unhealthy. The natives of Africa  
enjoy good health, & grow old in  
the neighbourhood of factories which  
prove graves to the Europeans who  
dwell among them. The <sup>aborigines</sup> ~~origines~~

= It has been observed that  
the body suffers  
much less in passing from the extremes  
of heat to cold, than from the extreme  
of cold to heat. —

Cold creates

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of Hispaniola & Jamaica know nothing  
of the diseases which have since ex-  
-ticipated destroyed so many thousand  
of the descendants or fellow citizens  
of the men who at first extirpated  
them. Even those ~~but~~ civilized inhab-  
-itants of warm countries who live  
agreeably to reason, enjoy good health &  
attain to long life. Mr Townsend  
tells us that a Spaniard in Madrid  
~~is~~ conceals himself in a close and  
dark room during the heat of the  
day, - and thereby avoids all the  
diseases of warm weather. His  
bed - his drunks - his diet - his ap-  
-parel - &c are all accommodated to  
his climate - while the Englishman



who visits this country, & neglects  
all these precautions, generally pays  
for his temerity by submitting to  
some of the diseases which have been  
mentioned. I conclude therefore  
that most of the diseases of which  
have been ascribed to heat may be  
resolved into certain errors or insigne-  
-lanties in diet, <sup>drinks -</sup> dress - exercise - or  
passions of the mind. — the effects of

I go on to observe that heat ~~produces~~  
upon the body are much varied by being ~~they are~~  
~~different effects according as it is~~ combined  
with Dryness or moisture. In the deserts  
of Arabia & Nubia travellers often  
feel a difficulty of breathing which  
is relieved by inhaling a little  
moisture from a sponge which

V Day There is a material difference in the  
diseases of some countries according as the  
heat of the weather is accompanied by dryness,  
or moisture. Dr Clark says the diseases of a  
~~in the East Indies~~  
dry ~~less~~ hot season are ~~Dysentery~~ - Colic,  
and Coleras <sup>& Throat</sup> of a ~~mild~~ <sup>violent</sup> nature, while a wet &  
hot season produces ~~frenz~~ & dysenteries. Dr  
Hillary says the diseases of Barbadoes are  
more inflam'd in a hot & dry than in a  
hot & wet season. The same thing is taken  
notice of by Dr Dazzelle. The highly inflam'd  
type of the yellow fever in 1793 which so unfor-  
-tunely required copious Vol: - ~~was accompanied~~ <sup>followed an uncom-</sup>  
~~moorly dry summer.~~ was preceded & accom-  
-panied by unusually dry weather. Had  
moisture availed that heat, the fever w:

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they often carry with them for  
that purpose. The heat of a close  
stone room produces the same effect,  
and it is only to be removed by pro-  
moting the evaporation of water  
in the room. It would seem as if  
a certain portion of moisture in  
the air was absolutely necessary to  
its being ~~not~~ fit for respiration.

Moisture varies the effects of heat  
upon the body: When the <sup>temperature</sup> of  
the air rises to be equal or nearly  
equal to that of the body, it refuses to  
conduct off the ~~per~~ heat of the body,  
hence such an accumulation of  
heat, & perspiration take place as

probably been left openly inflam'd - or would  
have appeared in the form of a malignant  
Dysentery, that might have forbidden us.

& all writers on West India Diseases  
say the same thing.  
& Dr Wintingham in his Epidemics  
says for that season long & uniformly  
rainy in ~~yes~~ England were uncommonly  
healthy. ~~These~~ In some parts of the world,  
<sup>or rather moist</sup> which is ~~drawn~~ <sup>inhaled</sup> from the sea,  
produces a peculiar effect upon the temper,  
known in England by the name of Sea fret.  
It is common during in worth in Engl.  
& in Barcelona in Spain. It continues  
for four or five days, & during which  
time pinches or footfleas is universal  
among the inhabitants of those countries.

lay the foundation for many diseases.  
 When the temperature  
 of the moisture of the air is con-  
 siderably below the heat of the body,  
 it is seldom attended with any mor-  
 bid effects. Dr Hunter says the wet  
 seasons in Jamaica are not unhealthy  
 where the inhabitants are not  
 exposed to any morbid exhalations.  
 A temperate air joined with moris-  
 ture has a peculiar effect upon  
 the skin. It imparts to it its beau-  
 tiful red and white complexion.  
 The fine complexions of the natives  
 of England & Ireland are owing  
 chiefly to the constant moisture  
 of those countries, for there falls

D  
 Of late at Guatema in South America,  
 the intense heat of the sun produces a disease  
 of a very different kind from those which it  
 induces in the East Indies, & in the further parts  
 of Europe. It is known among the Natives  
 by the name of Lecka - or worm. It is  
 a fixed and exquisite pain in the Return  
 which terminates speedily in a mortification  
 & death. no worm attnds it. Its remedy Bacon  
 Hombolt informed me was a piece of a fresh  
 lime thrust up the anus. <sup>Liberia</sup>  
 & the heat of Insolation is common

in Jamaica, In Engl<sup>n</sup> in 1709 many people  
& even horses & oxen perished in the fields from  
it. In China Pekin in 1743, 11,000 people  
perished from it between the 14. & 25. of July.  
nously by O

A Frenchman in this city lost his ear  
for music, & his touch of a musical cord  
by a stroke of the sun.

